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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/583,388	05/30/2000	Donald F. Gordon	SEDN/245CIP4	1364

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EXAMINER

MA, JOHNNY

ART UNIT PAPER NUMBER

2623

DATE MAILED: 04/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/583,388	GORDON ET AL.	
	Examiner	Art Unit	
	Johnny Ma	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8 and 10-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8 and 10-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 1/23/2006 have been fully considered but they are not persuasive.
2. Applicant's primarily argues that the prior art of record, alone or in combination, fails to teach wherein the macroblocks do not cross any border between two adjacent background stripes ("the macroblocks not crossing any border between two adjacent background stripes").

Regarding applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., a special definition for "backgrounds stripe" such as alternating stripes of the program grid section background to visually separate text information into timeslots or channels [see Specification, pg.3, lines 10-15]) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The examiner respectfully submits that:

*While the claims of issued patents are interpreted in light of the specification, prosecution history, prior art and other claims, this is not the mode of claim interpretation to be applied during examination. During examination, the claims must be interpreted as broadly as their terms reasonably allow. In re AmericanAcademy of Science Tech Center, **>367 F.3d 1359, 1369, 70 USPQ2d 1827, 1834 (Fed. Cir. 2004)< (The USPTO uses a different standard for construing claims than that used by district courts; during examination the USPTO must give claims their broadest reasonable interpretation.). This means that the words of the claim must be given their plain meaning unless applicant has provided a clear definition in the specification. In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989) (discussed below); Chef America, Inc. v. Lamb-Weston, Inc., 358 F.3d 1371, 1372, 69 USPQ2d 1857 (Fed.*

Cir. 2004) (Ordinary, simple English words whose meaning is clear and unquestionable, absent any indication that their use in a particular context changes their meaning, are construed to mean exactly what they say. (see MPEP § 2111.01)

In the instant case, the term “background stripe” has been interpreted as broadly as the term reasonably allows, to equate to macroblock slices “wherein it is inherent that ‘the macroblocks do not cross any border between two adjacent backgrounds stripes’ as defined in the MPEG specification, also note Figure 4A where the slices do not overlap” (see Previous Office Action, pg. 3).

Applicant also argues that Zdepski does not teach “dividing an information section of a user interface into a plurality of macroblocks.” The examiner respectfully disagrees. The Zdepski et al. reference discloses “[i]n the preferred method of the present invention, the encoder compresses both the background (information section) and insert pictures, with the background bit stream having the necessary slice structure” (Zdepski 10:39-42) wherein “[e]ach of the background and insert pictures are comprised of slices. Each background picture comprises a plurality of slices... The MPEG-2 standard defines a slice as a contiguous sequence of 2 or more macroblocks (16 x 16 pixel blocks) that begin and end on the same row (of macroblocks)” (Zdepski 10:54-11:5).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zdepski et al. (US 2002/0122598 A1 of record) in further view of Ribas-Corbera et al. (US 6,385,345 B1 of record).

As to claim 8, note the Zdepski et al. reference that discloses an interactive television system and method for displaying a graphical user interface using insert pictures. The claimed “dividing an information section of a user interface into a plurality of macroblocks” is met by “[i]n the preferred method of the present invention, the encoder compresses both the background and insert pictures, with the background bit stream having the necessary slice structure” (Zdepski 10:39-42) wherein “[e]ach of the background and insert pictures are comprise of slices” and the slices comprise macroblocks (Zdepski 10:54-11:36). The claimed “the user interface including the information section and a display section” is met by “the video delivery system provides a compressed background picture [information section] and one or more compressed insert pictures [display section]. Each of the compressed insert pictures represents a display portion of the GUI” (Zdepski 2:51-65). The claimed “the information section including a plurality of background stripes” is met by “the compressed background picture comprises a plurality of slices” (Zdepski 2:66-67) wherein it is inherent that “the macroblocks not crossing any border between two adjacent background stripes” as defined in the MPEG specification, also note Figure 4A where the slices do not overlap. Note, the Zdepski et al. reference discloses encoding a MPEG-2 compliant stream (Zdepski 10:39-67). However, the Zdepski et al. reference does not specifically disclose the procedure in which this encoding is performed. Now note, the Ribas-Corbera et al. reference that discloses a method and apparatus for selecting image data to skip when encoding digital video. Ribas-Corbera et al. reference discloses dividing into macroblocks

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wherein “[i]n block-based image coding, the image frame 11 to be encoded is decomposed into multiple image blocks 14 of the same size, typically of 16x16 pixels per block 14” (Ribas-Corbera [0029]). The claimed “generate a transformed image” is met by “[t]he pixel values of the block 14 are transformed in transform 16 into a set of coefficients” (Ribas-Corbera [0029]). The claimed “quantizing the transformed image to generate a quantized image and encoding the quantized image to generate an encoded image of each macroblock” is met by “[t]he coefficients output from transform 16 are quantized in quantizer 18 according to a set of quantization values 22 and further encoded in coder 20” (Ribas-Corbera [0029]). Therefore, the examiner submits that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Zdepski et al. MPEG encoding with the Ribas-Corbera block skipping for the purpose of providing “more efficient bit rate control by not allocating bits to blocks or frames that should not be encoded” (Ribas-Corbera et al. [0014]).

5. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zdepski et al. (US 2002/0122598 A1 of record) in further view of Ribas-Corbera et al. (US 2002/0122598 of record), Vasconcelos (“Pre and Post-Filtering For Low Bit-Rate Video Coding” of record) and Lee et al. (US 5,748,789 of record).

As to claims 10 and 11, note, the Zdepski et al. and Ribas-Corbera combination teaches forward transforming, quantizing, and encoding as discussed in the rejection of claim 8. However, the Zdepksi et al. and Ribas-Corbera combination is silent as to low-pass filtering. Now note the Vasconcelos reference teaching pre and post-filtering for low bit-rate video coding. The Vasconcelos reference discloses pre-filtering to eliminate as much high frequency information as possible without compromising image quality and aims to eliminate high

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frequency sensor noise to avoid blurring of object boundaries (Vasconcelos, see Section 2. Pre-Filter). The Vasconcelos reference further discloses the use of low-pass filtering in the pre-filtering step (Vasconcelos, see Section 2. Pre-Filter). The claimed low-pass filtering reduces visual defects from encoding of the background stripes is met by the disclosed filtering to avoid blurring of object boundaries. Therefore, the examiner submits that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Zdepski et al. and Ribas-Corbera et al. combination teaching a forward transformed image for quantization and encoding with the Vasconcelos prefiltering for the purpose of facilitating the separating of background information and graphics wherein it is understood that the prefiltering step occurs before quantization. Furthermore, the Zdepski et al. reference does not specifically disclose encoding a blank background for the display section by skip encoding, when subsequent values of the display section do not change from corresponding intra-coded values at a predetermined time. Now note the Lee et al. reference discloses transparent block skipping in object-based video coding systems wherein “[c]ompression of video information (i.e., video sequences or signals) can provide economical storage and transmission of digital video information in applications that include, for example, interactive or digital television and multimedia computer applications... Conventional video compression techniques utilize similarities between successive image frames, referred to as temporal or interframe correlation, to provide interframe compression in which pixel-based representations of image frames are converted to motion representations. In addition, conventional video compression techniques utilize similarities within image frames, referred to as spatial or intraframe correlation, to provide intraframe compression in which the motion representations within an image frame are further compressed”

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(Lee 7:47-65). The claimed “skip encoding, when subsequent values of the display section do not change from corresponding intra-coded values at a predetermined time” is met by “[o]nce these transparent macroblocks and blocks are identified, the coder and decoder can skip coding for these macroblocks or blocks. Skipping of transparent information blocks applies when the entire transformation block is transparent... An example of a transparent macroblock is macroblock 1548, which lies entirely outside object 1540” (Lee 43:63-44:44:6). Therefore, the examiner submits that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Zdepski et al. blank background with the Lee et al. skip encoding for the purpose of providing economical storage and transmission of graphical user information to the user. Note the skipping of transparent macroblocks, i.e. the background, equates to the skip encoding of the subsequent values of the display section that do not change.

6. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zdepski et al. (US 2002/0122598 A1 of record) in further view of Ribas-Corbera et al. (US 6,385,345 B1 of record) and Eschbach (US 5,379,122 of record).

As to claim 12, the claimed “wherein lossless encoding is applied to the quantized image.” Note the Zdepski et al. and Ribas-Corbera et al. combination teaches the encoding of a quantized image as discussed in the rejection of claim 8. however, the Zdepski et al. and Ribas-Corbera et al. combination is silent as to whether the encoding process is lossy or lossless. Now note the Eschbach reference that discloses a decompression of standard ADCT-compressed images. The claimed “wherein lossless encoding is applied to the quantized image” is met by the encoding of an image “by a forward transform coding operation...each transform coefficient is divided by a quantizing value from a quantization table and the integer portion of a result is used

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as a quantized transform coefficient, and the blocks of quantized transform coefficients are encoded with a lossless encoding method” (Eschbach 5:1-15). Therefore, the examiner submits that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Zdepski et al. and Ribas-Corbera et al. encoding of a quantized image with the Eschbach lossless encoding of the quantized image for the purpose of providing coding/transmission efficiency by reducing bandwidth/storage constraints without the further loss of image data.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Johnny Ma whose telephone number is (571) 272-7351. The examiner can normally be reached on 8:00 am - 5:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on (571) 272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jm


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